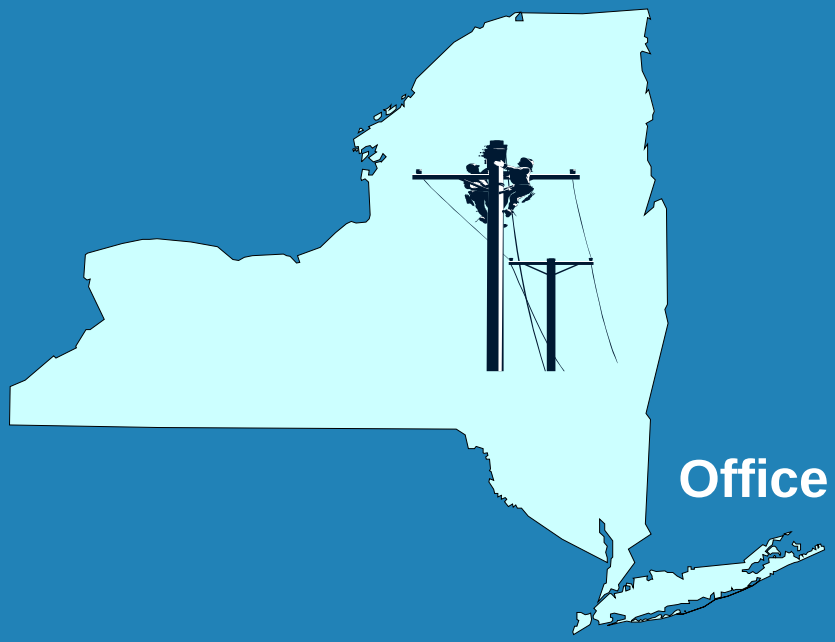
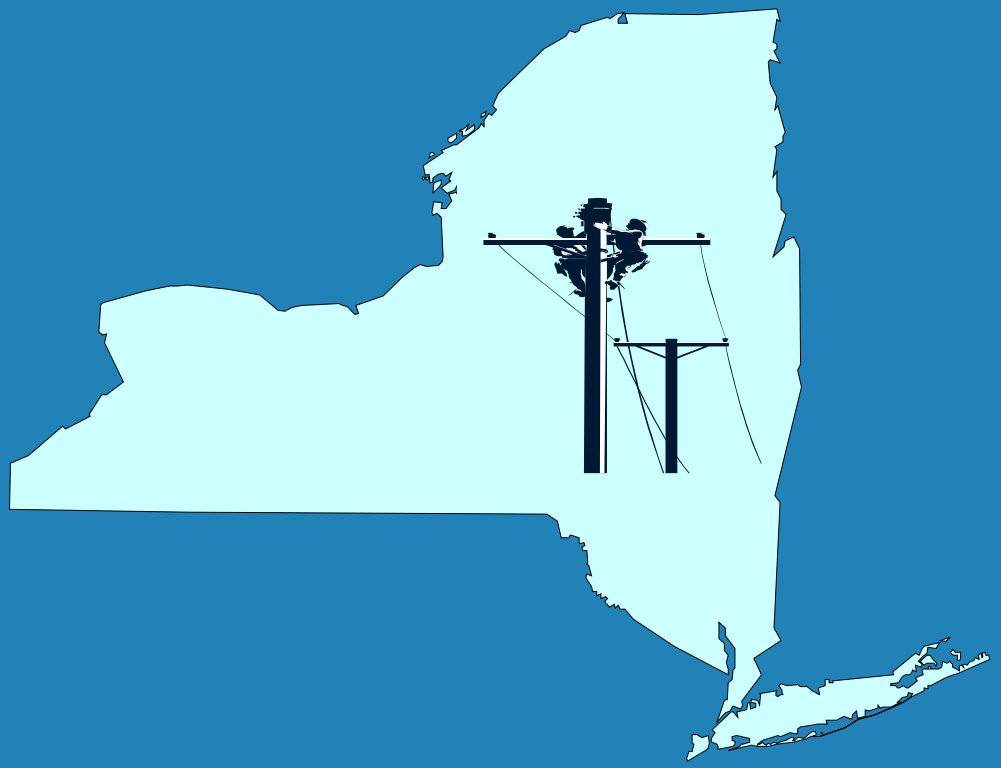
Combined Heat & Power Hurdles

A Regulator's View

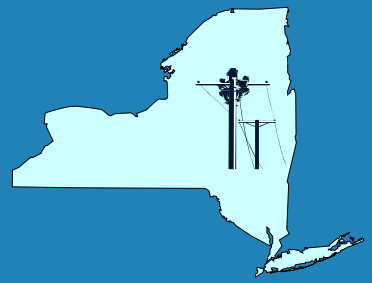


Harvey Arnett
Office of Electricity and Environment
Department of Public Service
October 6, 1999

- Interconnection
- Rates



Interconnection
Basic Cost Guideline

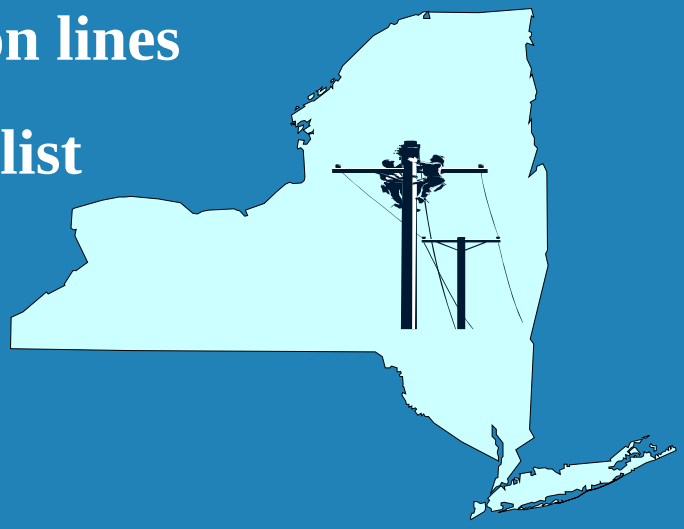


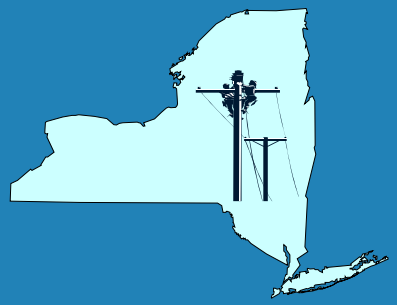
- PURPA
- PSL 66-c
- Opinion 82-10 NYS PSC Opinion on On-site generation
- On-site generation should only pay for interconnection costs that are above those that would be incurred to serve a full service customer with similar load characteristics
- Almost 6,000 Mw of On-site generation operating in parallel is connected under this cost guideline

Interconnection

Proceeding on Standardizing Interconnection

- July 1998 - Commission asks Staff to look at interconnection issues for distributed generation
- Staff initiates a collaborative proceeding
- Goal is to develop standard interconnection requirements for generation of 300 KVA or less connected to radial distribution lines
- Over 70 parties on the service list





Interconnection

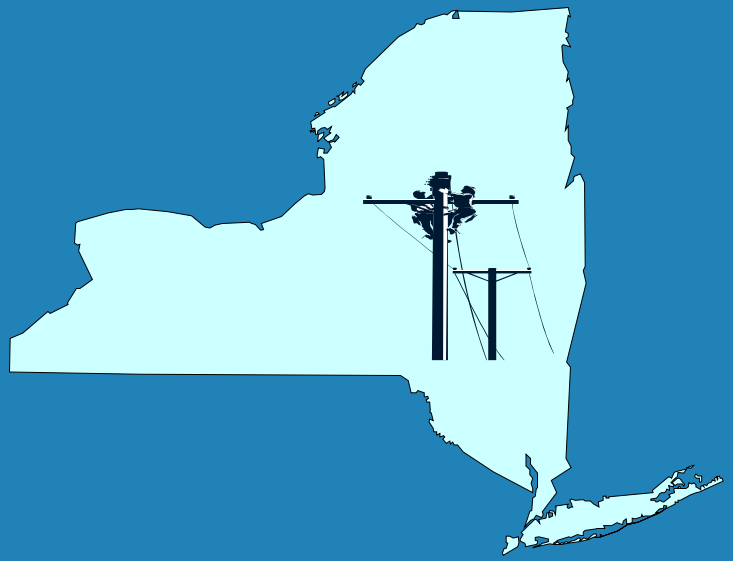
Status of Proceeding

- **July 1999 - Staff issued a proposal covering technical and non-technical issues**
  - **-Establish statewide technical standards**
  - **-Establish standardized contract**
  - **-Streamline and standardize application process**
  - **-Type tested equipment**
- **Sept 1999 - Comments were due from parties**
- **Late 1999 - Commission decision expected**
- **Phase II - Benefits & costs/tariffs & rates issues**

Rates

Basic Guidelines

- **PURPA**
- **PSC 66 - c**
- **Opinion 82 -10 Approach**
- **Rule 12 Approach (Niagara Mohawk)**
- **Full Service Option**



Rates

Opinion 82 - 10 Approach

- Customer has Full Service Option
- Back-up rates based on principal that the more distant the utility facility is from the customer the less that the facility can be charged to a sporadic use customer
- Marginal energy and demand costs are increased or decreased by the same proportions as full service rates to match embedded revenue requirements
- Contract demand charges and as used energy and ratcheted demand charges are used in the rate design

Rates
Rule 12 Approach

- Non residential customers with on-site generation pay a full service bill less a credit equal to the market value of energy and generation capacity produced by the on-site facility
- Unlike Opinion 82-10 Approach there are no transmission or distribution credits possible
- Negotiated as part of Power Choice, expires August 31, 2003
- Provides the utility with certainty of recovering net revenue from new on-site generators
- NMPC has proposed exempting random, renewable technologies up to 50 kW
- RG&E has proposed a hybrid of the Rule 12 Approach that includes some additional credits

Rates

Full Service Option For QFs

• Central Hudson	Only Full Service
• Con Edison	Yes
• NYSEG	Yes
• Niagara Mohawk	Rule 12
• Orange & Rockland	Only Full Service
• Rochester Gas & Electric	Only Full Service (Proposed Rule 12 Hybrid)

EXAMPLE OF BACK-UP/STANDBY SERVICE FOR ON-SITE "QF" GENERATORS

	Capacity	CHG&E	Con Ed	NYSEG	NMPC	O&R	RG&E
Annual Bill	50 kW	$2,009	$4,554	$2,230	$16,579	$3,614	$11,462
	1,500kW	$53,449	$140,088	$53,971	$148,140	$78,354	$349,703
Average cents/kWh	50 kW	9.2	20.8	10.2	75.7	16.5	52.3
	1,500 kW	8.1	21.3	8.2	22.5	11.9	53.2
All C&I		6.81	12.73	9.69	7.69	7.98	8.46

Basis for example: On-site generator takes back-up energy equal to 5% of total possible annual output.

Demand is only in February & June with equal amounts of energy taken in each month. Service is taken at high tension voltage.

"All C&I" is cents/kWh for all commercial and industrial (C&I) from 1998 PSC Annual Reports.

What's Next

Phase II - Early 2000

- **Rates & Tariffs including both Opinion 82-10 and Rule 12 proposals**
- **Other benefits of CHP, focus likely to be on distribution system costs avoided by CHP**
- **Proceeding on PSC website, www.dps.state.ny.us**